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10/783,851

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EXAMINER

HAMDAN, WASSEEM H

ART UNIT

PAPER NUMBER

2854

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/783,851

Applicant(s)

HEINEY ET AL.

Examiner

Wasseem H. Hamdan

Art Unit

2854

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/21/2006 has been entered.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-25 are rejected under 35 U.S.C. 102(b) as being anticipated by (US Patent 6,466,935 B1).

Regarding claim 1, Stuart discloses a system for providing distributed printing [FIG. 1; column 1, lines 32 -34] comprising:

a plurality of printers [140, 141; column 3, lines 25-29],

at least one print spooler [column 8, lines 45-46; 501; 225]; for managing printing operations [225] of the plurality of printers [140; 141] ; and

at least one relational database [124; 229] coupled with the print spooler [column 8, lines 45-46; 225], the relational database including a plurality of tables [column 2, line 4; Figures 3

Art Unit: 2854

and 4; column 4, lines 37-38], the plurality of tables storing a plurality of print objects to be used in distributed printing [column 2, lines 16-21; Figures 3 and 4], the plurality of print objects each having a hierarchical name such that the hierarchical name determines location information [column 7, lines 66-67; column 8, lines 1-16; FIG. 3; FIG. 4];

Wherein the at least one print spooler is configured to utilize the at least one relational database to perform scheduling print jobs [column 5, lines 65-66; column 6, lines 64-66; column 9, lines 20-22] base on based on a plurality of factors [column 9, lines 20-22] including the hierarchical name of one print object [column 7, lines 66-67; column 8, lines 1-16; FIG. 3; FIG. 4], a priority of the print jobs [column 9, lines 18-22] an availability of at least one of the plurality of printers [FIG. 2], and at least one other factor corresponding [column 9, lines 20-29] to at least one other of the plurality of print objects [FIG. 1 (120); FIG. 2 (220); FIG. 4] to be performed using distributed printing [FIG. 1; FIG. 2; column 1, lines 32-34. According to Handbook of Print Media, by Helmut Kipphan, pages 969-972, distributed printing is the same as decentralized printing, i.e. distribute and print, which it is taught by Stuart].

Regarding claim 2, Stuart discloses wherein a portion of the plurality of print objects corresponds the plurality of printers [column 2, lines 29-41; FIG. 3 (311-316); column 7, lines 66-67; column 8, lines 1-5].

Regarding claim 3, Stuart discloses the plurality of print objects includes a plurality of attributes for each of the plurality of printers [FIG. 3; column 2, lines 52-53; column 7, lines 48-56; column 7, lines 66-67; column 8, lines 1-16].

Art Unit: 2854

Regarding claim 4, Stuart discloses a user of the system has access to each of the plurality of printers [130; 230].

Regarding claim 5, Stuart discloses the print spooler [column 8, lines 45-46; 501; 225] and relational database [124; 229] are configured so that continuous printing can be performed using the plurality of printers [column 2, lines 66-67; column 3, lines 1-2; FIG. 2 shows that the 229 is connected to a plurality of printers via the network, and that is the same as continuous printing; column 6, lines 21-28; column 3, lines 34-37; lines 45-53; and lines 54-58; column 4, lines 37-40; column 5, lines 46-54; column 12, lines 21-24, that the plurality of printers are representing processing devices, and hence there is no interruption to the process. Stuart's system is a heterogeneous data (printing) processing. The Job Scheduler Work Flow Manager 224 uses a DB2 SQL query to retrieve its highest priority unit of work when a printer is ready. It sends the job to the printer, monitors the printing process, and hence one skilled in the art believes that Stuart's system will lead to non-interruption in the printing process].

Regarding claim 6, Stuart discloses the plurality of print objects includes a plurality of print jobs [FIG. 6].

Regarding claim 7, Stuart discloses the plurality of print objects includes a plurality of attributes for each of the plurality of print jobs [FIG. 4; column 8, lines 37-42].

Art Unit: 2854

Regarding claim 8, Stuart discloses the plurality of print objects includes a plurality of users [FIGS. 3 and 4; column 8, lines 26-30; 140; 141 (Stuart disclosures in column 8, lines 26-30 for one of the users 140. Similarly it does apply for the other users 141 via the network and the user interface 130)].

Regarding claim 9, Stuart discloses the plurality of objects includes a plurality of print events [310; 311].

Regarding claim 10, Stuart discloses the print spooler further includes a graphical user interface capable of displaying a status of each of a portion of the plurality of objects [130; column 3, lines 15-16].

Regarding claim 11, Stuart discloses the graphical user interface is updated using a query which retrieves only the status for each of a second portion of the plurality of objects that was updated after a previous query [column 4, lines 37-55. The “Relational Database System” structure and performance, as Stuart disclosed in column 4, reads on the claim language, which also confirmed by the “Microsoft Press Computer Dictionary”, Third Edition on pages 403 and 404, as described that the “Relational Database System” is: “a database or database management system that stores information in tables--rows and columns of data--and conducts searches by using data in specified columns of one table to find additional data in another table. In a relational database, the rows of a table represent records (collections of information about separate items) and the columns represent fields (particular attributes of a record). In conducting

Art Unit: 2854

searches, a relational database matches information from a field in one table with information in a corresponding field of another table to produce a third table that combines requested data from both tables. For example, if one table contains the fields EMPLOYEE-ID, LAST-NAME, FIRST-NAME, and HIRE-DATE, and another contains the fields DEPT, EMPLOYEE-ID, and SALARY, a relational database can match the EMPLOYEE-ID fields in the two tables to find such information as the names of all employees earning a certain salary or the departments of all employees hired after a certain date. In other words, a relational database uses matching values in two tables to relate information in one to information in the other. Microcomputer database products typically are relational databases. *Compare* flat-file database, inverted-list database.”

Regarding claim 12, Stuart discloses a system for providing distributed printing comprising.

a plurality of printers [140; 141; column 3, lines 25-29],

at least one print spooler for managing printing operations [column 8, lines 45-46; 501; 225]; and

at least one relational database [124; 229] coupled with the print spooler [225], the relational database including a plurality of tables [column 2, line 4; Figures 3 and 4; column 4, lines 37-38] for storing a plurality of print objects [column 2, lines 16-21; Figures 3 and 4], to be used in distributed printing [FIG. 1; FIG. 2; column 1, lines 32-34. According to Handbook of Print Media, by Helmut Kipphan, pages 969-972, distributed printing, is the same as decentralized printing, i.e. distribute and print, which it is taught by Stuart], each print object having a hierarchical name such that the hierarchical name determines location information

Art Unit: 2854

[column 7, lines 66-67; column 8, lines 1-16; FIG. 3; FIG. 4], the plurality of tables includes a printer table for the plurality of printers [column 6, lines 21-28], a jobs table for a plurality of print jobs [FIG. 6], an accounts table for a plurality of users [FIGS. 3 and 4; column 8, lines 26-30; 140; 141 (Stuart disclosures in column 8, lines 26-30 for one of the users 140. Similarly it does apply for the other users 141 via the network and the user interface 130)], and a history table for a plurality of print events [311] and wherein the plurality of objects includes the plurality of printers [140; 141], the plurality of print jobs, the plurality of users, and the plurality of print events, the plurality of printers, the plurality of print jobs, the plurality of users [FIGS. 3 and 4; column 4, lines 37-38. Technically, that's what the "Relational Database System" (RDS) does. Please see the definition for RDS above].

wherein the at least one print spooler is configured to utilize the at least one relational database to perform scheduling print jobs base on based on a plurality of factors including the hierarchical name of one print objects [column 7, lines 66-67; column 8, lines 1-16; FIG. 3; FIG. 4], a priority of the print jobs an availability of at least one of the plurality of printers, and at least one other factor corresponding to at least one other of the plurality of print object [column 8, lines 44-67; column 9, lines 1-30; column 10, lines 34-59; FIG. 1 (120); FIG. 2 (220); FIG. 4].

Regarding claim 13, Stuart discloses the plurality of tables includes a history table and the plurality of objects includes a plurality of print events [310].



Art Unit: 2854

Regarding claim 14, Stuart discloses that the system of claim 12 further comprising a network interface layer [110] for connecting the at least one print spooler [225] with the at least one relational database [124, 229].

Regarding claim 15, Stuart discloses a method for performing distributed printing [FIG. 1; column 1, lines 32 -34] comprising:

(a) using at least one print [column 8, lines 45-46; 501; 225] to access at least one relational database [124; 229] including a plurality of tables [column 2, line 4; Figures 3 and 4; column 4, lines 37-38] to schedule at least one print job [column 5, lines 65-66], to be used distributed printing [FIG. 1; FIG. 2; column 1, lines 32-34. According to Handbook of Print Media, by Helmut Kipphan, pages 969-972, distributed printing is the same as decentralized printing, i.e. distribute and print, which it is taught by Stuart], the plurality of tables storing a plurality of print objects including a plurality of printers [FIGS. 3 and 4], each print object having a hierarchical name such that the hierarchical name determines location information [column 7, lines 66-67; column 8, lines 1-16; FIG. 3; FIG. 4], the using the at least one print job including utilizing the at least one print spooler and the at least one relational database [FIG. 1 (124)] to perform scheduling the at least one print job and wherein the at least one print spooler is configured to utilize the at least one relational database to perform scheduling print jobs based on based on a plurality of factors including the hierarchical name of one print object [column 7, lines 66-67; column 8, lines 1-16; FIG. 3; FIG. 4], a priority of the print jobs an availability of at least one of the plurality of printers, and at least one other factor corresponding to at least one

Art Unit: 2854

other of the plurality of print objects [column 8, lines 44-67; column 9, lines 1-30; column 10, lines 34-59; FIG. 1 (120) and FIG. 2 (220); FIG. 4]; and

(b) printing the at least one print job to at least one of the plurality of printers [column 2, lines 25-26; column 6, lines 66-67].

Regarding claim 16, Stuart discloses the plurality of print objects includes a plurality of attributes for the plurality of printers and a plurality of job attributes for the at least one print job printers [FIG. 3; column 2, lines 52-53; column 7, lines 48-56; column 7, lines 66-67; column 8, lines 1-16], and wherein the accessing step (a) further includes:

(a1) matching a portion of the plurality attributes of the at least one of the plurality of printers to the plurality of job attributes for the at least one print job [column 10, lines 34-39. Technically, that's what the "Relational Database System" (RDS) does. Please see the definition for RDS above].

Regarding claim 17, Stuart discloses the accessing step (a) is performed using a query provided by the at least one print spooler to the relational database [column 4, lines 37-55; 220].

Regarding claim 18, Stuart discloses the plurality of objects includes a plurality of print events [310; 311].

Regarding claim 19, Stuart discloses the print spooler further includes a graphical user interface capable of displaying a status of each of a portion of the plurality of objects [130; column 3, lines 15-16].

Art Unit: 2854

Regarding claim 20, Stuart discloses that the method of claim 19 further comprising: (c) periodically updating the graphical user interface using a query that retrieves only the status for each of a second portion of the plurality of objects that was updated after a previous query [column 5, lines 19-33; column 7, lines 57-65].

Regarding claim 21, 22 and 24, Stuart discloses wherein at least one of each of the at least one print spooler and each of the at least one the relational database are stored on a plurality of servers [column 4, lines 37-40; column 3, lines 34-37; lines 45-53; and lines 54-58; column 12, lines 21-24].

Regarding claim 23 and 25, Stuart discloses wherein the at least one print spooler and the at least one relational database are configured so that continuous printing can be performed using the plurality of printers [column 2, lines 66-67; column 3, lines 1-2; FIG. 2 shows that the 229 is connected to a plurality of printers via the network, and that is the same as continuous printing, column 3, lines 34-37; lines 45-53; and lines 54-58; column 4, lines 37-40; column 5, lines 46-54; column 12, lines 21-24, that the plurality of printers are representing processing devices, and hence there is no interruption to the process. Stuart's system is a heterogeneous data (printing) processing. The Job Scheduler Work Flow Manager 224 uses a DB2 SQL query to retrieve its highest priority unit of work when a printer is ready. It sends the job to the printer, monitors the printing process, and hence one skilled in the art believes that Stuart's system will lead to non-interruption in the printing process].

Art Unit: 2854

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wasseem H. Hamdan whose telephone number is (571) 272-2166. The examiner can normally be reached on M-F (first Friday off) 6:30 AM- 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew H. Hirshfeld can be reached on (571) 272-2168. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Wasseem H. Hamdan

April 10, 2006